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Improved preparation of cyclopentenones

Abstract

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The present invention provides a process for preparing 2-cyclopentenones of the general formula:

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$$\mathbb{R}^4$$
 \mathbb{R}^1 \mathbb{R}^2

where R¹ to R⁴ are each hydrogen atoms or are alkyl or alkenyl

15 radicals having from 1 to 12 carbon atoms, cycloalkyl or
cycloalkenyl radicals having from 5 to 7 carbon atoms, aralkylene
or aryl radicals, by converting hexenedioic acids and/or their
esters of the general formulae

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$$R^{6}O_{2}C$$
 R^{3}
 R^{1}
 R^{2}
 $R^{6}O_{2}R^{5}$

III

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II

or

where R¹ to R⁴ are each as defined above and R⁵ and R⁶ are each hydrogen atoms or are alkyl radicals having from 1 to 12 carbon atoms, cycloalkyl radicals having 5 or 6 carbon atoms, aralkyl or aryl radicals, at temperatures of from 150 to 450°C, over solid, oxidic catalysts, wherein the catalysts on an oxidic support material comprise from 0.01 to 5% by weight of at least one alkali metal oxide.

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